

Spencer. The result is a form of vitalism. The movement which is to be found in the inorganic world is not merely continuous with, but synonymous with life and consciousness. Matter is not only the revelation of spirit, but body and spirit are one and the same. His method, which consists simply in the assumption that human spirit is an *analogon* of the world-principle, will not bear this conclusion. And his superstructure is rather in the air.

In his view of evolution there is nothing novel. It is, of course, teleological. Its real dynamic, as opposed to its formal occasions, is the all-inclusive being as principle of organisation. The working of this is elucidated quite after the manner of Mr. Spencer, by what Herr Sack oddly calls "antinomies"—viz. the antithesis of individuality and community, and the like.

It is when, he comes to deal with art, morals and religion that Herr Sack is most at home. These are man's adumbrations of the contents of the intellectual intuition of the universal spirit: Art, like ethics, is a social product. Ethics are treated in a manner on the whole definitely Spencerian, even to the condemnation of the social-democratic movement. In his discussion of religion, Herr Sack is opposed to Mr. Spencer, and, while owing a good deal to Prof. Max Müller, is original. Not in dreams with their presentment of the dead, not in natural phenomena like sunrise and sunset, not in anything so symbolic as totemism, does the matter of religion arise. They might confirm its sublimity; they are most of them too habitual and ordinary phenomena to create it. It is rather what suggests the invisible, the beyond, the infinite, that originates religious feeling—the horizon, the movement of the wind, the breath of life. Infinite space and infinite movement, and the *anima mundi*, are the elements of the religion of monism, and primitive religion was monistic. Cult degrades it into polytheism, and an interested priestcraft corrupts it; but monism has never been without a witness.

A world of spirits, in the spiritualist's sense, is of course incompatible with such a view. As is individual immortality. In truth, personality other than relative can belong only to the *Allwesen*, "in whom we live, and move and have our being."

In description, Herr Sack often shows a good deal of power. His views in the field of *Religionsforschung* doubtless express something of the truth, though not to the exclusion of other explanations. Indeed, the horizon, and the wind, and breathing are habitual too! Herr Sack's monistic formula, if true, must be established on other lines than his. Its only value here is that of any unverified vaticination that has brought peace to some of our fellow-men.

H. W. B.

First Stage Hygiene. By Robert A. Lyster, B.Sc.Lond. Pp. viii + 199. (London: W. B. Clive, 1900.)

IN general character this book resembles those already available for students of elementary hygiene and public health. It is intended more particularly for students receiving lessons upon the lines of the syllabus of the Department of Science and Art, now the Board of Education, but it may also be used by other students. The order of treatment differs from that usually adopted, but it may be doubted whether in some cases the change is an improvement. A noteworthy point, however, is that, so far as possible, the physiological facts required to intelligently consider hygienic principles are dealt with as they are required, instead of being described in a separate section devoted to physiology. Another characteristic of the book is that simple experiments illustrating the points described are given at the ends of some of the chapters. There is still room for a book containing not only lecture experiments, but a good course of laboratory work to be done by individual students of hygiene.

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LETTERS TO THE EDITOR.

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Measurements in Schools. Collateral Heredity.

I AM at present engaged on an investigation into the strength of collateral heredity, *i.e.* the degree of resemblance for a variety of mental and physical characters of pairs of brothers, pairs of sisters, and pairs of brothers and sisters. In this matter I cannot seek the aid of parents, for they are scarcely unbiased observers, but I have to appeal for aid to those who teach in schools, and have thus an independent and often extensive knowledge of their pupils' characters. This is very frequently combined with the scientific training and caution which renders the teacher's aid of special value. As it is necessary to obtain measurements and observations of both sexes, I have appealed to both men and women teachers, and as it is also needful to combine the sexes (in the brother-sister measurements) to those working in elementary schools, as well as in boys' public schools and in girls' high schools. The result of my appeal has been to bring me a great deal of most valuable aid. Several high schools have been dealt with, four of our chief public schools have been, or are being measured, and a considerable variety of private, elementary and other schools. But a single public school (even of 500 to 700 boys) will often have only ten to twenty pairs of brethren, not, perhaps, as many as in a village national school, and I am most desirous of getting further help. The determination of the strength of collateral heredity is a problem of great scientific importance, and it can only be achieved by co-operative action. I have found so many teachers in all classes of schools willing to give disinterested aid in the cause of science that I venture to make a further appeal through NATURE for more assistance. Besides observations of physical and mental characters, which can be recorded without measurement, my data papers ask for certain head-measurements, which can, following the printed instructions, be taken quite easily. I shall be most glad to send sample papers to any one willing to assist, and if, after considering these, they find themselves able to assist, say by filling in data papers for ten or more pairs of brothers or sisters, I will at once despatch a head-spanner, of which I have several at the present time, free. The head-spanner should not be retained (unless under special circumstances) for more than a few weeks. Where the school is a small one, one master has, as a rule, filled in the papers entirely; in larger schools, one of the science masters, or even the medical officer, has done the head-measurements, and the other data have been provided by house, form or consulting masters. In the ultimate publication of the statistics all aid will be duly acknowledged, but I make the appeal for help simply on the ground that the investigation of heredity is to-day one of the most important scientific problems, and that its exact quantitative determination is well within the reach of co-operative observation.

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The Perseid Meteoric Shower.

IN the years from 1893 to 1899 inclusive, about 120 determinations of the Perseid radiant were made. With the exception of three or four positions, the dates of the observations ranged from August 1 to 16, while the majority were for August 10 and 11 only.

It seems of little use to continue accumulating observations of the radiant point on and near the date of its maximum. What we essentially require are observations of the earlier stages of the shower during the last half of July, and as the present year offers a good prospect for obtaining them, I trust observers will make a special effort in this direction. The moon will reach her last quarter on July 19, and will prove a very slight hindrance to observation during the ensuing fortnight. When the sky is clear it should be watched all night, the paths of such meteors as are visible carefully recorded, and the results for each date kept separate, so that the place of the Perseid radiant may be traced in its diurnal motion of about 1° to the E.N.E. Some really good determinations of the radiant in July would be valuable, for very few have ever been made owing to the